

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

(DRAFT)

Conditional Major, Operating

Permit: F-07-039

Metal Solutions Design & Fabrication, LLC.

Florence, KY 41042

July 26, 2007

Mark Labhart, Reviewer

SOURCE ID:	21-117-00181
AGENCY INTEREST:	82290
ACTIVITY:	APE20060001

SOURCE DESCRIPTION:

Metal Solutions Design & Fabrication, was formed in 2005 from three separate businesses to build a diversified metal fabrication and welding company. Products include both custom engineered equipment and standardized product lines such as the following:

- Custom Fabrication and Welding
- Ground Support Equipment
- Air cargo containers
- DOT Certified IP-1, IP-2 & IP-3 Shipping Containers
- Material handling systems
- Structural Steel Systems
- Automotive Industry reusable packaging
- Ornamental Ironwork
- Stair systems
- Handrails & Guardrails

Much of the activities at Metal Solutions consist of metalworking operations which are inherently low emitting processes (PT/PM10). Metal Solutions does have 2-spray coating booths which give the source a high PTE (VOC and HAP) even though actual emissions have been low. Metal Solutions out-sources much of their product coating at the present time and has elected to take emission limitations to reflect their current operations.

COMMENTS:

- **401 KAR 59:225 New miscellaneous metal part and products surface coating operations, is not applicable** to this facility per Section 6 (3). VOC emissions are limited to 20 tpy to preclude the applicability of this regulation.
- Potential to emit based on mass balance, using 1 gallon per hour as the maximum spray rate per booth. All volatiles in the coating materials are considered to be emitted.
- Due to the low actual emissions from this source, Metal Solutions was given the option of

demonstrating compliance solely by keeping track of total coating usage. Based on EPA's guidance¹, the source was given a 3000 gallon limit. This limit was derived by the EPA using an assumed coating which is 100% HAP at 6 lb/gallon. Potential emissions from 3000 gallons of such a coating would be 9 tpy, and therefore the source could not possibly exceed a major source threshold, (or the 9 tpy permit emission limitation) if they stay below this limit.

1. Source: Technical Support Document for Potential to Emit Guidance Memo. Documentation of Emission Calculations. Tim Smith, USEPA/OAQPS. April 1998

Since the VOC limit is greater than 9 tpy the permit allows the source to exceed this 3000 coating limit, but compliance is not automatically assumed for this case. Rather the source must track and calculate the actual VOC and HAP emissions using the real coating formulations and properties for each 12-month period for which the total coating usage exceeds 3000 gallons.

EMISSION AND OPERATING CAPS DESCRIPTION:

Metal Solutions has requested voluntary emission limitations. VOC emissions shall not exceed 20 tons per year and emissions of any single HAP shall not exceed 9 tons per year as calculated on a 12-month rolling total basis. Since the potential HAP emissions at Metal Solutions are VHAP from the coating materials, the 20 tpy VOC limit precludes the need for a combined HAP limit to avoid the 25 tpy major source threshold.

OPERATIONAL FLEXIBILITY:

Metal Solutions is not restricted on the hours of operation or quality of products produced as long as the emission limitations above are not exceeded.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.